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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,559	09/26/2003	Tsuyoshi Kaneko	116945	8128
25944	7590	04/25/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			NASRI, JAVAID H	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/670,559	Applicant(s) KANEKO, TSUYOSHI	
	Examiner Javaid Nasri	Art Unit 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 and 18-31 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-16, 19-26 and 28-31 is/are rejected.
- 7) ☒ Claim(s) 11, 18 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/3/06</u> | 6) <input checked="" type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by Lorenzo et al (5,163,118).

Lorenzo et al discloses, **for claim 31**, a convex member (34) provided on a substrate (30), and an entire optical waveguide member (38) provided solely on the convex member, the convex member being disposed in parallel with the optical waveguide member (see figure 2G).

Note: USPTO interprets claims, giving claims their “broadest reasonable interpretation.”

(see, e.g., In re Morris, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997)).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-10, 12-16, 19-26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lorenzo et al. in view of Malone et al (5,402,511).

Lorenzo et al discloses (see figure 2G), **for claim 16**, a convex member (34) provided on a substrate (30); and an optical waveguide member (38) provided solely on the convex member (see figure 2G), **for claim 19**, the convex member being integrally formed with the substrate (see figure 2G), **for claim 22**, an upper surface of the convex member being a curved surface (see marked figure 2H, attached), **for claim 23**, an angle made between an upper surface of the convex member and a surface that contacts the upper surface on a side member of the convex member being acute (see figure 2H), **for claim 24**, an upper member of the convex member being formed in an inversely tapered shape (see figure 2H), **for claim 28**, an IC; and an optical element (col. 1, lines 10 and 11), **for claim 29**, an optical waveguide, **for claim 30**, an optical module (see background), **for claim 26**, a first convex member (34) provided on a substrate (30); an optical waveguide member (38) provided solely on an upper surface of the first convex member (see figure 2G), a second convex member (See marked figure 3E, attached) disposed in parallel with the first convex member; and a covering layer (42) that covers an optical waveguide member and is provided in a part on an upper surface of the second convex member (depends on the orientation),

However, Lorenzo et al does not disclose.

- a) For claim 16, the convex member having a lower refractive index than the optical waveguide member. Malone et al discloses a buffer layer (4) having lower refractive index than the waveguide (3), see col. 3, lines 14-21, therefore, it would have been obvious to one of ordinary skill in the

art, at the time of the invention for Lorenzo et al to have the convex member to have a lower refractive index than the optical waveguide member in view of Malone et al to minimize the loss of signal energy.

- b) For claim 25, the optical waveguide being buried under a layer with a lower refractive index than the optical waveguide member. Malone et al discloses the waveguide material is surrounded on all sides by material having a lower refractive index than the waveguide material (see col. 3, lines 19-21), therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Lorenzo et al to have the optical waveguide being buried under a layer with a lower refractive index than the optical waveguide member in view of Malone et al to minimize the loss of signal energy.

- c) For claims 20 and 21, a cross-section of the optical waveguide member being in the shape of a truncated oval/circle. It would have been an obvious matter of design choice for Lorenzo et al to have a cross-section of the optical waveguide member being in the shape of a truncated oval/circle, since such a modification would have involved a mere change in the size or shape of a component. A change in size or shape is generally recognized as being within the level of ordinary skill in the art.

***In re Rose*, 105 USPQ 237 (CCPA 1955).**

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- d) For claims 1-10 and 12-15, Lorenzo et al. in view of Malone et al discloses all the structural limitations of claims 1-10 and 12-15, as shown above,

However, Lorenzo et al. in view of Malone et al does not disclose:

- i) the claimed language, the claimed method language is counter member of the apparatus claimed.

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to develop a particular method for the disclosed apparatus of the cited references.

***Allowable Subject Matter***

5. Claims 11, 18 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**REASONS FOR ALLOWANCE**

6. The following is an examiner's statement of reasons for allowance:

The reason for allowance of the claims is the inclusion of the limitation,

- a) For claim 18, none of the prior art teaches or suggest, alone or in combination the refractive index of the convex member and the refractive index of the covering

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layer being approximately equal, in combination with other limitations in the claim, which is not found in the prior art reference of record.

- b) For claims 11 and 27; none of the prior art teaches or suggest, alone or in combination the optical waveguide includes two of the second convex members and the first convex member being disposed between the two-second convex members, in combination with other limitations in the claim which is not found in the prior art reference of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

7. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

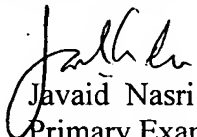
### **Contact**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Javaid Nasri  
Primary Examiner  
Art Unit 2839

JN

Jhn

April 19, 2006